

Appln. No. 09/418,628
Amdt. dated: August 8, 2003
Reply to Office Action dated May 8, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS) for a cellular communications network, said method comprising the steps of:

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determining a number of pooled available channel processor (CP) resources which are unused in said BBS, said BBS supporting a plurality of cells, each of said available CP resources capable of processing any of a plurality of traffic channels contained on any frequency channel assigned to said BBS;

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in response to notification of a call originating from or to a subscriber in any of said plurality of cells, determining if said number of available CP resources of said BBS is at least one;

selecting any of said available CP resources for processing of said call; and
assigning said call to said available CP resource which has been selected.

2. (previously presented) The method according to claim 1 further comprising the step of decrementing the number of available CP resources by one after said assigning step.

3. (previously presented) The method according to claim 1 further comprising the step of rejecting said call if all CP resources of said BBS are in use.

4. (previously presented) The method according to claim 3 further comprising the step of incrementing a count of rejected calls each time a call is rejected for lack of sufficient available CP resources.

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5. (previously presented) The method according to claim 1 wherein said number of available CP resources is determined by counting the total number of CP resources assigned to said BBS, and decrementing said total number by at least one of, a total number of active subscriber calls in a BBS and the number of CP resources assigned for handling control channel traffic in said BBS.

6. (previously presented) The method according to claim 1 further comprising the step of incrementing said number of available CP resources in said cell when said call is terminated.

7. (previously presented) The method according to claim 1 further comprising the steps of: handing over said call from a first cell of said BBS to a target cell of said BBS; and continuing to process said call on said available CP resource which has been selected and assigned prior to said step of handing over said call to said target cell.

8. (currently amended) A resource management system for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS) for a cellular communications network, comprising:

means for determining a number of available pooled channel processor (CP) resources which are unused in said BBS, said BBS supporting a plurality of cells, each of said available CP resources capable of processing any of a plurality of traffic channels contained on any frequency channel assigned to said BBS;

means responsive to notification of a call originating from or to a subscriber in any of said plurality of cells for determining if said number of available CP resources is at least one;

means for selecting any of said available CP resources for processing of said call; and

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means for assigning said call to said available CP resource which has been selected.

9. (previously presented) The system according to claim 8 further comprising means for decrementing the number of available CP resources by one after said assigning step.

10. (previously presented) The system according to claim 8 further comprising means for rejecting said call if all CP resources of said BBS are in use.

11. (previously presented) The system according to claim 10 further comprising means for incrementing a count of rejected calls each time a call is rejected for lack of sufficient available CP resources.

12. (previously presented) The system according to claim 8 wherein said means for determining a number of available CP resources which are unused in said BBS further includes means for counting the total number of CP resources assigned to said BBS, and decrementing said total number by at least one of, a total number of active subscriber calls in said BBS and the number of CP resources assigned for handling control channel traffic in said BBS.

13. (previously presented) The system according to claim 8 further comprising means for incrementing said number of available CP resources in said cell when said call is terminated.

14. (previously presented) The system according to claim 8 further comprising:
means for handing over said call from a first cell of said BBS to a target cell of said BBS; and
means for continuing to process said call on said available CP resource as previously selected, after handing over said call to said target cell.

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15. (previously presented) The method of claim 1, wherein said BBS is a sectorized BBS, said sectorized BBS supporting a plurality of sectors.

16. (previously presented) The system of claim 8, wherein said BBS is a sectorized BBS, said sectorized BBS supporting a plurality of sectors.

17. (previously presented) The system of claim 16, wherein said BBS comprises a plurality of broadband transceivers.

18. (new) A method for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS) for a cellular communications network, said method comprising the steps of:

allocating to a transceiver assigned to a cell a first plurality of channel processor (CP) resources for processing traffic channels contained on a frequency channel;

in response to notification of a call originating from or to a subscriber in said cell, determining if there is at least one of said first plurality of CP resources that is available for processing said call;

assigning said call to any one of said first plurality of CP resources that is available.

19. (new) The method according to claim 18 further comprising the step of assigning at least a second plurality of CP resources to said transceiver responsive to said determining step if there is not an available one of said plurality of CP resources among said first plurality of CP resources.

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20. (new) The method according to claim 18 further comprising the step of rejecting said call if all of said CP resources assigned to said transceiver are in use and there are no further CP resources available to be allocated to said transceiver.

21. (new) The method according to claim 18 further comprising the step of incrementing a number of available CP resources in said cell when said call is terminated.

22. (new) The method according to claim 18 further comprising the step of decrementing a number of available CP resources in said cell when said call is assigned to one of said CP resources.

23. (new) A resource management system for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS) for a cellular communications network, comprising:

means for allocating to a transceiver assigned to a cell a first plurality of channel processor (CP) resources, each of said CP resources capable of processing traffic channels contained on a frequency channel assigned to said transceiver;

means responsive to a notification of a call originating from or to a subscriber in said cell, for determining if there is an available one of said first plurality of CP resources that is available for processing said call;

means for assigning said call to said available one of said first plurality of CP resources.